BROWNOUT: MASTERING DUST LANDINGS p. 12

KNOWLEDGE

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OFFICIAL SAFETY MAGAZINE OF THE U.S. ARMY

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OFFICIAL SAFETY MAGAZINE OF THE U.S. ARMY

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Mission statement: USACRC supports our Army by collecting, storing, analyzing, and disseminating actionable information to assist Leaders, Soldiers, Families, and Civilians in preserving/protecting our Army's combat resources.

We welcome your feedback. Please e-mail comments to **safe.knowledge@conus.army.mil.**

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ENFORCE STAN

We all are familiar with the basic attributes and actions a Leader must possess — Be, Know and Do. We also know that discipline refers to having the self control to enforce obedience and standards, even when no one is watching. But what exactly is a standard? Webster's defines it as "something established by authority, custom or general consent as a model or example."

Our Army is a standards-based organization with customs dating back centuries. Our standards for conduct, military courtesy and laws governing our operations are well documented. There is a rule or a standard for almost everything we do. If standards exist, then why do we still see so many acts of indiscipline directly violating those standards?

I believe, as many of you do, that the safety climate and culture of a unit is determined by the command but best displayed in the individual actions of our Soldiers when no one is watching them. Our Soldiers know in their hearts and minds what is right but oftentimes disregard the known standard, opting for an easier way to perform a task.

Easier doesn't always mean quicker or with less effort. Sometimes it can mean a concerted effort to circumvent a known

THE DARD

> “Our **SOLDIERS** know in their **HEARTS** and **MINDS** what is **RIGHT** but oftentimes disregard the known **STANDARD**, opting for an **EASIER** way to **PERFORM** a **TASK**.”

standard, which often results in destruction of property, injury or, even worse, death.

During a recent senior safety symposium, Command Sgt. Maj. Neil Ciotola, III Corps and Fort Hood command sergeant major, gave a presentation in which he discussed standards and why enforcing standards is so critical to the good order of the Army. In celebrating the Year of the NCO, it was only fitting to have one of our Army’s senior NCOs share his observations from his long, distinguished career as a Leader. Ciotola said, “Our troopers want to do the right thing, but many have said, ‘Why bother? We know that no one will be checking up on us.’”

How can this be? As Leaders, we know that we are responsible for the safety and well-being of everyone assigned to our organizations, including our civilians and Family members. Given the high stakes involved, how can we afford not to be engaged with our Soldiers, civilians and Families?

Ciotola went on to ask the audience how many had a son or daughter currently serving in the armed forces. As the hands proudly shot into the air, Ciotola’s countenance changed from cheerful to concern.

“This is exactly why we, as Leaders and safety professionals, must be engaged,” he said. “We owe it to our Families to protect its most precious entrusted gift — its sons and daughters.”

It is through leadership at every level that we can affect those measures that keep our Soldiers and civilians safe every day. And through educating the various echelons of leadership, they are able to extend that safety net to encompass Families. Leadership is not something left at the office, motor pool or flight line when we go home. It is what we do every day, on and off duty, by setting the example and committing ourselves to what’s right because that’s what our Army Family demands of us.

If you think one individual cannot change the climate of a unit, just look around. Your actions will speak louder than your words every time, so never pass up an opportunity to positively influence those around you. If you want to figure out where you can help your unit, battalion commanders can reevaluate or better examine the safety climate and culture of their organization through the Army Readiness Assessment Program tool found on the U.S. Army Combat Readiness/Safety Center’s Web site. It’s another method the command can use to strengthen its formation.

As Leaders, we must all know the standard, be the standard setter and, most importantly, enforce the standard.

Army Safe is Army Strong!

WILLIAM T. WOLF
Brigadier General, USA
Director of Army Safety

HANDLING the

COL. JOHN CAMPBELL, D.O.
Command Surgeon
U.S. Army Combat Readiness/Safety Center
Fort Rucker, Ala.

As much as we don't like to think that our mothers and other sage advisers were right, the older we get, the more we realize how correct they were! The old adage "an ounce of prevention is worth a pound of cure" still holds true — especially when it comes to preventing heat-related injuries.

HEAT

Every year, Leaders and Soldiers look for new ways, better techniques or "magic bullets" to eliminate or minimize heat injuries in their formations. During training and combat operations, weather and environmental conditions are briefed as part of the overall operations plan. Also, risk mitigation is supposed to be incorporated into mission planning from start to finish. So what happens? Despite our best efforts, Soldiers still experience heat-related injuries and, sadly, some die of these injuries.

Information is readily available on the U.S. Army Center for Health Promotion and Preventive Medicine (USACHPPM) Web site. The organization's heat-injury prevention page is filled with critical information describing the signs and symptoms of heat injuries and treatment options. The site includes ready-made presentations, as well as statistics, multimedia awareness materials and a heat injury risk-mitigation matrix. You name it and the information is available. Why isn't all this information passed to the Soldiers? Or, if it is, why isn't the injury rate decreasing?

Although Leaders are held responsible for any injury, to include heat-related injuries, the responsibility doesn't stop there. Each Soldier is responsible to follow unit

WHY DOES HEAT STROKE KILL SOLDIERS EVERY YEAR,

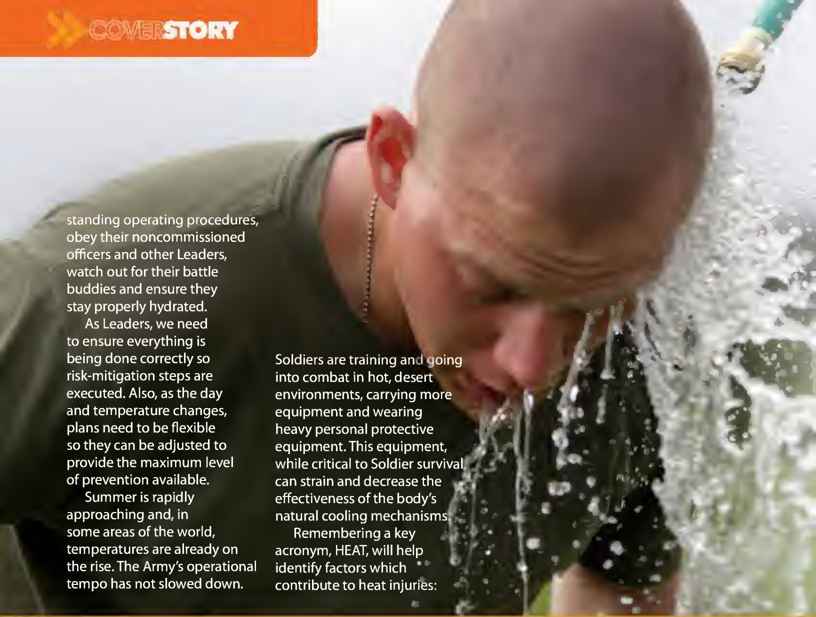
DESPITE THE THOUSANDS OF HOURS OF HEAT-INJURY PREVENTION BRIEFINGS?

1. **Misunderstanding the onset of heat stroke.** During hard work — a quick march with a field load — a Soldier can go from optimum performance to heat stroke in a matter of minutes. Heat-injury prevention literature/briefings often give the impression that heat injury onset is sequential over a period of time (i.e., personnel will first suffer heat cramps, then heat exhaustion, then heat stroke).

2. **Underestimation of Soldier workloads.** Supervisors/exercise observers frequently underestimate Soldier work/exertion levels. Soldiers can neither carry, nor drink, enough water to prevent heat stroke during high-exertion activities such as quick marches, heavy materials handling or wearing MOPP gear.

3. **Underestimation of the impact of additional heat stressors.** (e.g., wear of MOPP gear, body armor and field packs/weapons loads)

4. **Overemphasis on water intake as the primary prevention of heat injuries.** While proper water intake is vital, work/exertion level management is just as critical during high-exertion activities. Proper water intake must be balanced with other prevention measures, including acclimatization, conditioning, temperature monitoring and timely first aid and medical treatment.



standing operating procedures, obey their noncommissioned officers and other Leaders, watch out for their battle buddies and ensure they stay properly hydrated.

As Leaders, we need to ensure everything is being done correctly so risk-mitigation steps are executed. Also, as the day and temperature changes, plans need to be flexible so they can be adjusted to provide the maximum level of prevention available.

Summer is rapidly approaching and, in some areas of the world, temperatures are already on the rise. The Army's operational tempo has not slowed down. Soldiers are training and going into combat in hot, desert environments, carrying more equipment and wearing heavy personal protective equipment. This equipment, while critical to Soldier survival, can strain and decrease the effectiveness of the body's natural cooling mechanisms.

Remembering a key acronym, HEAT, will help identify factors which contribute to heat injuries:

INDIVIDUAL RISKS FOR HEAT CAS

(The more factors, the higher the risk)

- Not acclimatized to heat (need 10 to 14 days to get trainees adequately acclimated).
- Exposure to cumulative days (two to three days) of any of the following: increased heat exposure, increased exertion levels and lack of quality sleep.
- Poor fitness (unable to run two miles in less than 16 minutes).
- Overweight.
- Minor illness (cold symptoms, sore throat, low-grade fever, nausea, vomiting).
- Taking medications (either prescribed or over the counter), supplements or dietary aids (e.g., allergy or cold remedies or Ephedra supplements).
- Use of alcohol in the last 24 hours.

FYI

For more information on preventing heat injuries, visit the U.S. Army Center for Health Promotion and Preventive Medicine's Web site at http://chppm-www.apgea.army.mil/heat/.

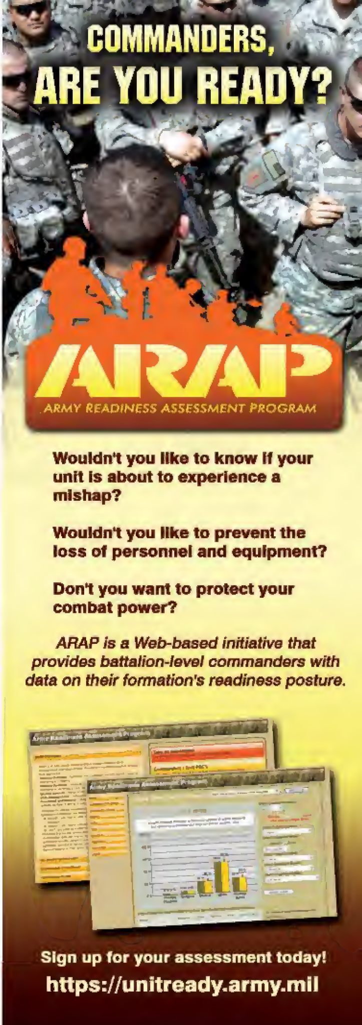
- **H**igh heat category, especially on several sequential days (measure Wet Bulb Globe Temperature when ambient temperature is more than 75 F).
- **E**xertion level of training, especially on several sequential days.
- **A**cclimatization (and other individual risk factors — see info box below).
- **T**ime (length of heat exposure and recovery time).

Leaders and Soldiers share the responsibility for preventing heat-related injuries. Leaders must use the tools available to help emphasize the importance of preventing heat-related injuries.

There is another old saying, "You can lead a horse to water, but you can't make him drink." However, such advice doesn't apply when it comes to preventing heat-related injuries. To stay fit to fight, we must take appropriate preventive measures and monitor ourselves and our battle buddies for the signs of heat-related injuries.«

SUALTIES

- **Prior history of heat illness (any heat stroke or more than two episodes of heat exhaustion).**
- **Skin disorders such as heat rash and sunburn that prevent effective sweating.**
- **Age greater than 40 years.**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All Gain, No Pain

KEITH HAURET AND DAVID SWEDLER
Injury Prevention Program
U.S. Army Center for Health Promotion and Preventive Medicine
Aberdeen Proving Ground, Md.

Sports and recreational activities help Soldiers achieve and maintain a high level of physical fitness. Many of these activities, however, carry some degree of injury risk or hazard. Each year, Soldiers are injured, some fatally, while exercising or participating in sports or other recreational activities. Fortunately, many of these injuries can be prevented.

In 2007, sports participation was the third-leading cause of injury hospitalizations for Soldiers. In field investigations conducted by the U.S. Army Center for Health Promotion and Preventive Medicine's (USACHPPM) Injury Prevention Program, physical training (PT) and sports were also the most frequent causes of injury resulting in sick-call visits and limited-duty days.

Sports and PT-related injuries are also common among deployed Soldiers. During the current deployments in Iraq and Afghanistan, about 20 percent of air evacuations for noncombat injuries have resulted from PT and sports activities. These activities are the leading cause of air-evacuated noncombat injuries.

Basketball, football, PT and weightlifting account for 76 percent of these sports-related injuries during deployments. USACHPPM has noted more serious weightlifting injuries among deployed Soldiers. At least one-third of these injuries occurred with the bench press and involved serious muscle tears.

There are several injury hazards associated with weight training, including lifting too much weight, using improper technique and using anabolic steroids. To reduce the risk of injury, Soldiers should implement the following controls into their weightlifting routine:

- Use caution when loading and unloading the weight plates.
- Train with a spotter, especially when doing high-weight, low-repetition exercises.
- Be sure you know and use proper lifting form and technique.
- Warm up with repetitions of lighter weight before attempting heavier weights.
- Don't hold your breath; inhale lowering the weight, exhale pressing it back up.
- Avoid anabolic steroids — they're illegal and cause long-term health effects.
- Increase the amount of weight and number of repetitions gradually.

Unique injury hazards are present in most physical exercise, sports or recreational activities. Soldiers and Leaders have learned through use of composite risk management (CRM) how to identify hazards and control risks across the full spectrum of Army missions and activities. Soldiers must implement CRM for their specific activity to assess and identify hazards or risk of injury. Once the hazards are identified, Soldiers and Leaders must implement the controls proven to reduce these injury risks.

Suggested controls for athletic and recreational activities include:

Softball

- Use breakaway bases and a double first base.
- Wear a batting helmet.
- Wear a mouth guard.
- Call for fly balls to avoid collisions.

Basketball

- For a previously sprained ankle, wear a sports ankle brace to avoid re-injury.
- Remove trip hazards (water bottles, gym bags, etc.) from the sidelines.
- Wear a mouth guard and eye protection.
- Remove rings, watches and other jewelry.

Touch or flag football

- Avoid overaggressive play.
- Check the field for rocks, holes and other hazards.
- Wear appropriate footwear for the field and weather conditions.
- Wear a mouth guard.
- Remove rings, watches and other jewelry.

Bicycling, roller-skating, skateboarding, inline skating

- Wear a helmet.
- Wear appropriate elbow and knee protection.

Water activities (swimming, boating, sailing, kayaking, tubing, rafting, diving)

- Don't enter the water alone — always have a buddy.
- Always wear a life jacket when in open water.
- No diving into shallow water or close to rocks.
- Avoid using alcohol.

All-terrain vehicles (ATV)

- Children must use an age-appropriate ATV with adult supervision.
- Wear a helmet, eye protection and proper clothing.
- Avoid using alcohol.

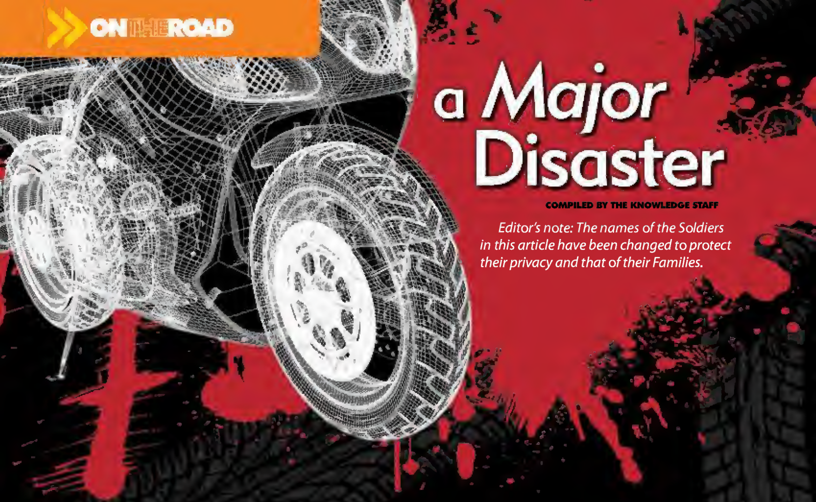
Outdoor grilling and barbecue

- Check propane bottles for leaks.
- Use only approved lighter fluids; do not use gasoline.
- Ensure proper ventilation.

As warmer weather approaches and we head outdoors for exercise, sports and recreation, let's make certain to identify the hazards associated with our activities and implement controls which will allow us to minimize the injury risk for ourselves, our Family members and other Soldiers.«

DID YOU KNOW?

Across all military services, more than 25 million limited-duty days occur annually due to injuries, with physical training/sports being a top injury category. Military Leaders are in the best position to prevent injuries. The Injury Prevention Through Leadership Course is entertaining and engaging and provides concise, evidence-based information and guidance Leaders can use to prevent many injuries. The one-hour, interactive online course teaches practical strategies to help Soldiers meet their fitness goals. Visit Combat Readiness University II at https://crc.learn.army.mil. Log in with your AKO ID and password, select the Courses tab, open the Joint Forces Safety Training folder and enroll in the course today.



a Major Disaster

COMPILED BY THE KNOWLEDGE STAFF

Editor's note: The names of the Soldiers in this article have been changed to protect their privacy and that of their Families.

Leaders engaging Soldiers is considered essential to preventing accidents. But what happens when Leaders fail to engage each other?

Maj. William Dean headed home on a Friday afternoon after completing his 42nd week of Command and General Staff College (CGSC). He was looking forward to celebrating his second anniversary with his wife that evening. When he got home, he found out his ex-wife had driven from another state to pick up their 10-year-old daughter. Although disturbed by the news, he and his wife went ahead with their plans to celebrate their anniversary at a nearby casino. After dinner and drinks, Dean drove home and fell asleep on the couch while watching television.

About 9:30 the next morning, Maj. Charles Hicks, a CGSC classmate and fraternity brother of Dean's, rode his motorcycle to the Dean home. Although Hicks knew Dean wasn't Motorcycle Safety Foundation trained and didn't have an operator's license or insurance for his bike, he suggested they ride around the local area. About 45 minutes later, Dean got onto his 1998 Yamaha YZF 600RK motorcycle and followed Hicks onto the road.

During their ride, they visited a motorcycle shop and a park. While at the park, Dean told his friend about the stressful visit from his ex-wife the previous day. When they arrived back at Dean's home about 1 p.m., the two friends parted company. Dean relaxed at home, playing video games and drinking until about 5 p.m. About an hour later, Dean got into a heated discussion with his wife. After arguing for a half-hour, he jumped onto his motorcycle and angrily rode off.

Dean left the subdivision and accelerated to a high speed. The street had a 35-mph speed limit and transitioned from a residential area to a rural area. After riding about three miles, Dean approached an intersection where a sign warned of limited sight distance ahead. A hay field obscured the view of cross traffic at the intersection, which was controlled by a two-way stop sign.

Dean approached the intersection at high speed. He was about 130 feet away when he realized the danger and locked his brakes to try and avoid entering the intersection. Despite leaving a 74-foot-long skid mark, he couldn't stop in time and slammed into the right-side passenger door of a pickup crossing the intersection.

The collision instantly killed Dean and threw him more than 60 feet across the intersection. The impact was so violent it bent the right side of the pickup's frame. The pickup then veered off the left side of the road and overturned 2 1/2 times before landing on its roof. The driver was ejected and severely injured, while the passenger was thrown around violently inside the vehicle. Neither was wearing a seat belt.

Passing motorists saw the accident and immediately called 911. An off-duty nurse happened upon the accident scene and checked the pickup's occupants. When one told her they'd been hit by a motorcycle, she searched the crash site and located Dean, finding him lying face down without a pulse. A state trooper requested medical support, and a helicopter flew the driver of the pickup to a major trauma center while an ambulance transported the passenger to a local medical facility. Emergency medical service personnel checked Dean but couldn't find a pulse and contacted the county coroner. The coroner arrived at the crash site and pronounced Dean dead.

Why Did the Accident Happen?

- The motorcycle wasn't out of control, but the rider was.
  - Alcohol dulled Dean's perceptions, stealing the reaction time he needed to stop before entering the intersection.
  - Anger dulled Dean's judgment, influencing him to speed and ride recklessly.
  - Propelled by alcohol, anger and speed, Dean entered an intersection, collided with another vehicle and died.
- A buddy left a buddy "behind." Hicks knew Dean wasn't properly trained, licensed or insured to ride, but encouraged him to do so anyway. Despite knowing the standards, Hicks ignored them and set up his buddy to die on the streets.
- Seat belts are never optional. The pickup's occupants failed to wear their seat belts. Even though they were hit by a much lighter vehicle, the impact was still severe enough to overturn the truck and eject the driver.

How Could this Accident be Prevented?

- Soldiers must have the personal discipline to not drive their vehicles or operate motorcycles after drinking alcohol or while in an adverse mental state.
- Soldiers should exercise peer-to-peer leadership and not let violations of known standards go unchallenged.
- Seat belts must be worn at all times by all personnel in a moving vehicle.

Outcome

- A field-grade officer was fatally injured.
- A civilian was seriously injured and another received minor injuries.
- An Army Family was devastated and unit morale degraded.
- The motorcycle and truck were destroyed.«

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MASTERING Dust LANDINGS

RET. CHIEF WARRANT OFFICER 5 DENNIS MCINTIRE
Fort Worth, Texas

Today, helicopters are being called upon to conduct operations in environments and at tempos far different from what was envisioned nearly 20 years ago. Brownout was inconceivable while patrolling the East German border back then. It has only been in recent years, with the wars in Afghanistan and Iraq, that this problem comes to the forefront.

Dust landings — the effect of swirling dust and debris caused by the rotor wash during the landing of a helicopter — will challenge the best aviators. In heavy dust, brownout is not a question of "if," but "when." The "if" is a given, while the "when" is a factor we have little control over.

It's important to understand the dust generated during the landing phase doesn't cause a true brownout until the vortices bring the heaviest dust through the rotor system. That said, if you can be in a touchdown position before that point, your landing will be easier and much safer.

Additionally, you must understand the direct correlation between the aircraft angle of approach and the rate of descent as it applies to the ground roll/run following touchdown. It is best explained this way. At one extreme we can use a shallow approach angle, in which our airspeed is higher (with a touchdown at or slightly above effective transitional lift), our rate of descent is very low and our ground roll/run is long. That approach is relatively easy to master and has its place when landing to flat, unobstructed areas.

For illustrative purposes, let's say the other extreme is a 90-degree vertical approach angle. This theoretical approach would use zero airspeed and a very high rate of descent and would result in little or no ground run. It would also be extremely difficult to perform. Again, this example illustrates the extreme ends of the spectrum. I am not advocating this type of approach. What I am saying is you can execute a safe and controlled dust landing with minimum ground roll/run to most areas using factors in between these two extremes.

Over the years, I have executed thousands of dust approaches while training others. During that time, I have learned dust landings using a steep side of a normal approach work best when landing to the toughest and dustiest landing zones. This type of approach is tough to perform, but I believe every aviator needs to master it.

Approaches using the steeper approach angle must be flown in concert with a higher rate of descent than that of a normal approach. By a higher rate of descent, I am not implying the aircraft has to literally fall out of the sky. Hardly so. The rate of descent is just slightly higher than that of a normal approach. While the brownout condition occurs without warning using the steeper approach, it reduces the opportunity for the dust to cycle through your rotor system prematurely. That decreases the likelihood of a brownout before you are landing assured. In addition, these approaches require greater skill due to the timing factor involved with adjusting the controls for touchdown. The benefits, however, become apparent when landing to unimproved, dusty landing zones. This approach reduces the ground roll/run while allowing the pilot to see the landing area for virtually the whole approach.

The confidence to perform a dust landing with this type approach comes only through repetition with the benefit of a more experienced pilot or instructor pilot on the other set of controls. Most of this training can take place in a nondusty area to reduce wear and tear on the aircraft. The "final exam," however, must be in true brownout conditions. Only then can aviators know their skills are up to the task.

Surprisingly, I've noticed many aviators, especially those flying more powerful aircraft, tend to ignore the wind when determining their landing direction. Forgive me for stating the

"**LIMITED** visibility **OPERATIONS**, whether they're in **DUST, SAND OR SNOW,** are **SOME** of the most **CHALLENGING ENVIRONMENTS** an Army **AVIATOR** can face."

obvious, but this cannot be overemphasized. Landing with a tailwind forces you to land with a higher ground speed to avoid browning out prematurely. With that in mind, remember "wind calm" does not always mean there is no wind. Just a few knots of wind can make all the difference in the world when it comes to your dust landing. Try it yourself. Experiment with a tailwind and headwind dust landing under identical light wind conditions. You can use a quartering headwind/tailwind if you like. Regardless, you'll be amazed with the results.

Knowing the surface wind is especially important to me. In times where trusted indicators of surface wind were absent (trees, dust, smoke or water), I went through the effort of generating my own dust with a low approach to an area away from my final landing area. I performed the maneuver at a distance from my final landing area to avoid obscuring it prematurely for my later approach. This technique allowed me to accurately determine the wind direction and then consider it, along with other factors, in deciding my final approach method.

Formation landings add a measure of risk due to the increased chance of collision during the landing or go-around phase. Collective training is a must to ensure individual crews work as one during their formation landing. While the landing techniques for formation aircraft are the same as those for single-ship operations, all aircraft in the formation must use the same approach angles, speeds and braking. In addition, formation landings in dust can be "stacked down" as a technique so the trail aircraft touches down first. All other chalks land in succession with the lead aircraft touching down last, thereby enabling all the aircraft to land in relatively "clean" air. Another landing technique to use is an echelon formation so aircraft can touch down simultaneously. This is only one of many techniques that can be used if the landing zone is large enough and the ground commander doesn't mind his forces being spread out.

Limited visibility operations, whether they're in dust, sand or snow, are some of the most challenging environments an Army aviator can face. The primary duty of the pilot in command is the safe operation of the aircraft while performing the mission. Flight technique is important while flying in these challenging conditions. However, crew coordination briefs, rehearsals and application, coupled with the correct flight techniques, are critical to both mission accomplishment and aircrew safety. Fly safely! «

> "It's **IMPORTANT** to **UNDERSTAND** the **DUST** generated during the **LANDING** phase **DOESN'T** cause a true **BROWNOUT** until the **VORTICES** bring the heaviest **DUST** through the **ROTOR** system."

SAFE OPERATIONS IN DVE

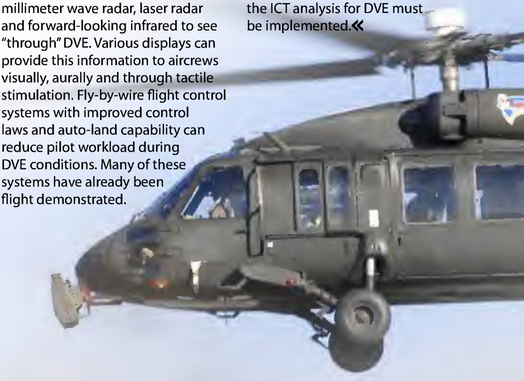
CHIEF WARRANT OFFICER 4 JOHN M. MOSELEY
Concepts and Requirements Directorate
Fort Rucker, Ala.

The U.S. Army Aviation Center of Excellence recently led an integrated concept team (ICT) effort to define and document the capabilities required for safe aviation operations in degraded visual environments (DVE). This effort concluded in February 2009. The ICT defines DVE as flight conditions of partial or no visibility due to fog, heavy rain or dense obscurants such as fine sand, dust, smoke, blowing debris or snow. These conditions are most critical to pilots operating visually at low altitudes such as during takeoff, hover, terrain flight and landing.

Problems caused by the loss of situational awareness to DVE often result in pilots maneuvering their aircraft into unusual attitudes or experiencing excessive drift, rollover and/or contact with adjacent aircraft or obstacles. This problem is evident by the number of aircraft incidents and losses during Desert Shield, Desert Storm, Operation Enduring Freedom (OEF) and Operation Iraqi Freedom (OIF). The ICT analysis revealed the current fleet of Army aircraft lacks sufficient capability to provide aircrews with adequate situational awareness for safe operations in DVE.

To solve this capability gap, the ICT looked for changes and/or improvements to doctrine, organization, training, materiel acquisitions/upgrades, leadership, education, personnel and facilities. While nonmateriel solutions (like the techniques described by Ret. Chief Warrant Officer 5 Dennis McIntire in the article "Mastering Dust Landings" on page 12) can improve situational awareness and operational safety, some emerging technologies for materiel improvements to legacy and future aircraft provide a more complete solution. These technologies include, but are not limited to, improved sensors, displays, flight controls, low-speed flight symbology, synthetic vision and obstacle detection warning systems. Some sensors use millimeter wave radar, laser radar and forward-looking infrared to see "through" DVE. Various displays can provide this information to aircrews visually, aurally and through tactile stimulation. Fly-by-wire flight control systems with improved control laws and auto-land capability can reduce pilot workload during DVE conditions. Many of these systems have already been flight demonstrated.

Aviation operations in DVE have become the norm in OEF and OIF. Future deployment locations around the world may have the same type conditions. To give the warfighter and commanders the most capability and risk mitigation today and tomorrow, materiel and nonmateriel solutions identified in the ICT analysis for DVE must be implemented.«



Keeping Safety in Sight

TRI-SERVICE VISION CONSERVATION AND READINESS PROGRAM STAFF
U.S. Center for Health Promotion and Preventive Medicine
Aberdeen Proving Ground, Md.

The Army has a comprehensive and effective program for preventing battlefield eye injuries. But what about the risk of an eye injury at home? The good news is Soldiers can use the same piece of gear, Military Combat Eye Protection (MCEP), to protect their vision in both environments.

The MCEP program is managed by the Program Executive Office (PEO) Soldier, the Army organization responsible for virtually everything a Soldier wears or carries, including protective eyewear. Type and style of eyewear is a personal preference and it's not surprising Soldiers are more likely to wear eye protection if it looks and feels good. PEO Soldier has established a list of authorized products to help Soldiers make informed decisions when selecting combat eyewear.

The Authorized Protective Eyewear List (APEL) is comprised of seven spectacles and five goggles that have been tested and certified to meet or exceed the standards for Army-approved ballistic eyewear. To

FYI

To help promote the use of protective eyewear, the Authorized Protective Eyewear List has been expanded to offer Soldiers more choices. The list can be found at https://peosoldier.army.mil/pmseq/eyewearmessage.asp.

make the list, eyewear must meet both the American National Standards Institute eye protection standard (ANSI Z87.1 2003) for safety glasses and goggles, and the U.S. military's ballistic protection standards.

While deployed, the general guideline is, "Any time your helmet is on, your MCEP should be on." However, the Tri-Service Vision Conservation and Readiness Program advocates taking that a step further: "Any time you are outdoors, your MCEP should be on."

But are Soldiers aware that these eye protection devices can benefit them off the battlefield? Home and recreational activities pose similar risks for eye injury, and combat-approved

AUTHORIZED PROTECTIVE EYEWEAR LIST

ESS Profile NVG
(Rx capability)
(4240-01-540-5585)

ESS Land Ops
(may be worn over glasses)
(4240-01-504-5576)

UVEX XC
(Rx capability)
(4240-01-516-5361)

Arena Flakjak
(4240-01-548-7366)

ESS Vehicle Ops
(may be worn over glasses)
(4240-01-525-5101)

Oakley SI Ballistic
M Frame 2.0
(4240-01-525-3095)

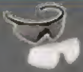
Revision Sawfly
(Rx capability, Dual Size)
(4240-01-527-4051 reg)
(4240-01-527-4018 lrg)

Revision Desert Locust
(Rx capability)
(4240-01-547-6218)

ESS ICE
(Rx capability, Dual Size)
(4240-01-525-5085 ICE 2)
(4240-01-537-6143 ICE NARO)

UVEX Genesis
(Rx capability)
(4240-01-552-4131)

Wiley X SG1
(4240-01-504-0994)



Wiley X PT-1
(4240-01-510-7853)

protective eyewear works just as well at home as it does on the battlefield.

Beyond deployment, the "train-as-you-fight" concept applies. MCEP should be worn during training, just as it would be worn during actual combat or deployment. However, the danger of an eye injury doesn't end when Soldiers redeploy or leave the training area. Activities Soldiers perform routinely — groundskeeping, maintenance and shop work — all present significant potential for eye injury, both at work and home.

Common tasks like lawn mowing, weed whacking, auto maintenance and working with power tools are some of the most common sources for eye injuries in U.S. households. According to an analysis of emergency department visits for eye injuries in 2005, 44.6 percent of serious eye injuries now occur at home, with work-related injuries at 20.3 percent. This is quite a change from a 1985 study that found 48 percent of eye injuries were work related and 27 percent happened at home.

Why the change? Over the past 20 years, enormous effort has gone into educating employers, supervisors and the

Military Combat Eye Protection (MCEP)
For either SAW you use...
Wear your MCEP
★★★★ VISION READY IS MISSIO
Army Center for Health Promotion and
Vision Conservation and Readiness

TA-094-0608
MCEPP
Authorized Protective Eyewear List
Program Executive Office Soldier
"Combat Eyewear- Your Sight, Your Choice"
USACHPPM

DID YOU KNOW?

The U.S. Army Center for Health Promotion and Preventive Medicine offers postcard-sized Authorized Protective Eyewear List reference cards to military organizations at no charge. To order cards, visit http://chppm-www.apgea.army.mil/hio_public/orders.aspx. Filter products by selecting the Workplace Safety and Health category and the Vision Conservation subcategory.

American workforce about the need for, and effectiveness of, safety eyewear in protecting against on-the-job hazards. This vision conservation effort, combined with legislative guidance from the Occupational Health and Safety Administration, has resulted in a decrease in workplace eye injuries.

The flip side of this improvement in work-related injury rates is that the message never made it home, where there is no mandate for use of safety eyewear. While workplace injuries have gone down, home injuries have not. Fortunately, Soldiers already have the solution in hand. Once issued a set of MCEP spectacles or goggles, those items are retained by the Soldier and can be used at home and work.

> "The **SUCCESS** of **SAFETY EYEWEAR PROGRAMS** in **WORK** environments can **TRANSLATE** into a **DECREASE** in injuries **AT HOME.**"

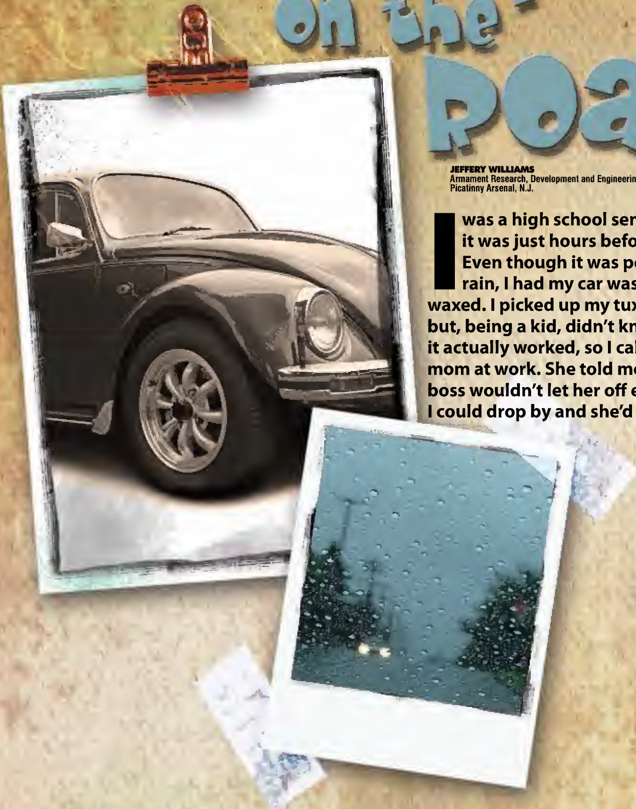
With the exception of racket sports and paintball (which have protective eyewear requirements specified by the American Society for Testing and Materials), MCEP eyewear meets the eye protection needs for most other eye hazards. An added benefit — they provide nearly 100 percent UV protection.

The success of safety eyewear programs in work environments can translate into a decrease in injuries at home. The U.S. Army Center for Health Promotion and Preventive Medicine strongly encourages Soldiers to use MCEP for any noncombat, nondeployment, nontraining activity where eye hazards exist. That includes home and work.

Remember, an eye injury occurring at home is as much of a threat to your vision as one that happens in the field. Make sure you're protected — use your MCEP! Vision Ready is Mission Ready!«

A Chump on the Road

JEFFERY WILLIAMS
Armament Research, Development and Engineering Center
Picatinny Arsenal, N.J.



I was a high school senior and it was just hours before prom. Even though it was pouring rain, I had my car washed and waxed. I picked up my tuxedo, but, being a kid, didn't know how it actually worked, so I called my mom at work. She told me her boss wouldn't let her off early, but I could drop by and she'd help me.

I put on the obvious parts — like the pants, shirt and cummerbund — but was clueless about how the bow tie worked or how the button covers went. I wanted to get everything right, so I jumped into my car and headed to where my mom worked.

I drove up a short on-ramp to get onto an interstate highway. Visibility was poor (thanks to the rain) and I was in a hurry. A pickup had stopped at the far end of the ramp, waiting to merge onto the highway. The driver looked back, checking for a gap in the traffic, so I did the same thing, hoping to spot one big enough for us both to merge. Sure enough, I saw a good-sized break in the approaching traffic. Glancing forward, I saw the pickup's brake lights go off as the driver inched forward. I thought, "Good, this is it — now's my chance to merge."

I looked again to check the gap. Assuming the pickup's driver had pulled out, I nailed the gas without bothering to look forward. Bad move! Unfortunately, the pickup's driver had gotten cold feet and slammed on his brakes. When I looked forward, I swerved to the left, but it was too late to completely miss him. My right-front fender and passenger door dragged along the left side of the pickup's rear bumper. While all I did was leave a dent in the bumper, it did a nice job of tearing up my fender and door.

And the fun wasn't over yet. I was still moving! In attempting to swerve and miss the pickup, I shot right into the middle of the traffic. Although I don't remember it, the pickup's driver said I swerved almost all the way across the highway

> "I **LEARNED** that just because I had a **DRIVER'S LICENSE**, it **DIDN'T** mean I knew how to **SAFELY OPERATE** a vehicle."

into the far-left lane, winding up in front of a huge tractor-trailer. Its driver moved left into the median as far as he could and managed to miss me.

Boy, was I lucky! When it was safe, I crossed the freeway and pulled onto the right shoulder. There, I discussed insurance with a very irate pickup driver. Fortunately, the car — although mangled — was still drivable.

I picked up my date and went to the prom. Not that it did me any good. All I could think about was the accident. I imagined what would have happened had I hit a family in a van or a guy heading home from work to his wife and kids. I can only be thankful no one was hurt.

Looking back, I realize I not only almost killed myself; I nearly caused an accident that could have killed or injured others. And it was all because I was in a big hurry and too anxious to think about the consequences of my actions. I'd forgotten to take a moment and think about what I was doing. My car was a couple tons of metal moving down the road with a tank filled with flammable, explosive fuel. While it was a great way to get from point

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TAKE A WALK ON THE SAFE

Safety is important for all roadway users — pedestrians and drivers alike. Both are expected to follow the safe rules of the road to help prevent crippling or deadly accidents.

Each year, about 4,600 pedestrians are killed and another 70,000 are injured in traffic accidents. Following the tips below will help you to walk on the safe side.

1. Be alert and attentive to traffic and don't cross the street until it's safe.

2. Be responsible and obey pedestrian Walk/Don't Walk signals. One-third of all fatal collisions are a result of a pedestrian disregarding traffic signals or making a dangerous judgment.

3. Look left-right-left. If the road is clear, begin crossing. If you're in a country where motorists drive on the left side of the road, then reverse the process and look right-left-right.

4. When crossing the street, continue to check for traffic in all directions, especially for vehicles making a right turn on red.

5. At a crosswalk, if there is traffic, make eye contact with drivers so they can see you, understand your intentions and stop before you start to cross.

6. Use sidewalks when they are available. On roads without sidewalks, it is safest to walk on the left side of the road, facing traffic.

7. Never attempt to walk along or cross expressways, interstate highways or turnpikes. If your vehicle breaks down, remain inside and use your cell phone to call for help.

8. When walking at night or during the low-light hours of dawn or dusk, wear something reflective on your clothing and shoes or carry a flashlight. Almost 50 percent of all pedestrian fatalities occur between 6 p.m. and midnight — a six-hour window. Wearing reflective clothing is especially important during the fall and winter months, when daylight hours are shorter and people often wear dark coats or other clothing which may be difficult for motorists to see.

9. Limit consumption of alcohol if you plan on walking. About 34 percent of all pedestrians killed have a blood alcohol content (BAC) of .08 or greater.

10. Supervise road crossings for children under the age of 10

A to point B, it could also be a battering ram if used irresponsibly.

I learned that just because I had a driver's license, it didn't mean I knew how to safely operate a vehicle. And that's scary. Driving safely isn't just knowing how to use the brakes, accelerator and steering wheel; it's paying attention to what's happening on the road around you and considering the consequences.

I was lucky that night. The only victim was my wallet, which was lightened by $1,500 to cover my car repairs. While that wasn't exactly "chump change," it's cheaper than being a chump on the road. That can cost you — and others — a lot more!«

SIDE

TAMARA REDMON
Pedestrian and Bicycle Safety
Federal Highway Administration
Washington, D.C.

since they don't have the capacity to safely judge the situation. Pedestrian fatalities involving children between the ages of 5 and 9 make up one-fourth of all roadway fatalities for this age group.

Drivers also need to be extra vigilant. Stay alert. Make sure your lights are on and refrain from taking your eyes off the roadway. Be sure to look for pedestrians in areas where they are likely to appear, such as an intersection, but remember walkers can be on any road. It could save a life — or change yours forever.«

WHAT WOULD IT TAKE?

PERRY WILDS
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U.S. Army Combat Readiness/Safety Center
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There are events in your life that change the way you think. One happened to me when I was 17 years old.

As I sat on my front porch talking to a friend, we heard the screech of car tires followed by the sound of an impact. We looked up and saw a Cadillac sitting in the middle of the intersection. It had smashed into a Volkswagen Beetle, causing it to overturn three times before coming to rest on its tires against a house.

The Cadillac's driver was a 16-year-old boy who'd only had his license for two weeks. He'd been taking a spin in his father's car and, at the time, probably thought it was fun to go 10 mph over the speed limit and run a stop sign. The 17-year-old girl driving the Volkswagen was on her way home from working at a fast-food restaurant.

While my friend went into the house to dial 911, I went to see what I could do to help. When the Cadillac T-boned the Volkswagen, it crushed the passenger side of the car halfway to the stick shift. Although the driver's side had minor damage from the rollover, it was mostly intact.

What wasn't intact was the driver. It didn't take a doctor to know that the young lady would soon be dead. She hadn't been wearing her seat belt and was tossed around inside her car while it rolled, breaking many of her bones. As she looked at me, blood came from her eyes, nose and mouth. I held her hand for the 10 minutes it took for the fire department to get there. But she took her last breath well before that.

I'll never forget her face or the look on the boy's face as he was handcuffed. He had started off thinking he was just going to have some fun, only to realize he'd just killed a young girl. I'll never forget the look of disbelief on her parents' faces when they drove up to the accident. I cannot even imagine the pain they must have felt.

I'll never forget that day. That's when I made up my mind to never ride in a car unrestrained. How about you? Have you made the same decision? If not, what would it take to get you to buckle up every time? Would it help change your mind to know 55 percent of vehicle occupants killed in accidents were unrestrained? Think about that the next time you take that short drive home. And hope it's not your last.«

SAFETY IN

The West Point Sport Parachute Team commemorated its 50th anniversary with an alumni reunion and jump into the Army-Air Force football game. Team members were also celebrating a remarkable safety achievement, as well — no cadet fatalities in a half-century of participation and competition in a dangerous extreme sport.

The 32-member team, jumping five days per week and amassing more than 5,000 jumps per year, maintains an injury rate lower than most other sports at the Academy, including all contact sports. One of the reasons parachuting is inherently dangerous is equipment can be improperly rigged, packed or simply malfunction on opening. On average, skydivers worldwide experience malfunctions at a rate of about one per every 500 or so jumps. This year, West Point team members activated only three reserve parachutes, making their malfunction rate less than one-third the national average.

The team noncommissioned officer in charge, Army rigger and instructor Sgt. 1st Class Scott Graham, acknowledges the team's success, but points to daily effort and a safety-conscious climate as a simple answer to a complex safety challenge.

"We stress individual responsibility and accountability," Graham said. "Cadets, starting with their first jump, are charged with inspecting, packing and storing their assigned parachutes."

Cadets on the team also become certified as instructors so they can inspect each other before boarding the aircraft, continuously during ongoing operations and as they jumpmaster fellow teammates out the door.

The focus on individual accountability and independent operations among these 19- to 22-year-old cadets, with only initial training and spot checking performed by well-trained cadre, may seem counterintuitive given the nature of parachute operations

THE SKY

CADET PHILIP DIVINSKI
United States Military Academy
West Point, N.Y.

and the Army's emphasis on safety. In fact, it's the key to the team's successful safety record.

"The parachute team is really a Leader development laboratory," said Col. Tom Kolditz, a West Point professor and participating instructor. "The danger that's inherent to this sport motivates cadets to focus intently on what they're doing, and with minimal coaching, they naturally assume responsibility and lead their less-experienced peers as the team trains."

Kolditz, who recently spoke on "in extremis leadership" at the Army's Senior Safety Professional Development Symposium, featured the parachute team's Leader development aspects in a book used in courses at West Point and elsewhere.

In this spirit of leadership development, each cadet on the parachute team understands that the ultimate purpose of four years at the Academy is preparation for leading Soldiers as Army officers. In this respect, the cadets on the team take pride in the courage and competence parachute operations require.

"No other team at West Point offers opportunities that expose cadets as near to life-and-death decision-making," said Cadet Trey Wheeler, class of 2010.

A cadet chain of command built on trust and camaraderie lies at the heart of the team. Beyond the experience and knowledge of the team's officer representatives and NCO coaches, cadets on the team take an active role in policing their own and expanding team skills.

Victories in competition and successful freefall parachute demonstrations are the West Point Sport Parachute Team's mission. However, all the accolades earned from performing well would be meaningless without an exemplary safety record. The team has the mentorship of its officer representatives and NCO coaches, as well as cadet leadership, to thank for such an accomplishment.«

USMA
HEISMAN TROPHY 1944 BLANCHARD 1946 DAVIS 1958 DAWKINS
Classic

WE HAD LEGAL WEATHER

CHIEF WARRANT OFFICER 3 WILLIAM H. MURRAY
12th Aviation Battalion, Davison Army Airfield
Fort Belvoir, Va.

It was May 16, 2006 — a day in Iraq I'll never forget. I was the pilot in command (PC) in the lead aircraft on the downed aircraft recovery team (DART). The day started out as a normal standby day. We pre-flighted the aircraft and, afterward, I conducted a thorough crew brief.

Following my brief, I returned to my room to catch a movie. A few hours later, I got a knock on my door and was told we had a mission and to report to the tactical operation center (TOC). My pilot (PI) for the mission was my roommate, so I didn't have to go far to instruct him to find the crew chiefs and meet me at the TOC.

I met the PC of the second aircraft at the TOC and reported to the battle captain to discuss the details of our mission. He told us an aircraft was down in Q-West due to tail rotor problems. After our PIs entered the TOC, we got our S-2 brief, maps and route of flight. After the crew brief, we sent our PIs to assemble the DART team and had them meet us at the aircraft. Both flight crews checked weather and exchanged information for the flight to Q-West.

At the aircraft, I had another crew brief. I updated my crew and the DART team on mission details. We went over the weather, frequencies and route of flight. We strapped in and took off as a flight of two. I was the lead aircraft to Q-West and the flight went off without any issues.

After landing at Q-West, the maintenance test pilot (MTP) examined the broken aircraft. The crew with the broken aircraft swapped aircraft with Chalk 2 of the flight and took off to continue their mission. The MTP diagnosed the problem and quickly fixed the aircraft. He then took a test flight around the traffic pattern. The test flight was successful and we continued as briefed.

In the meantime, my PI and I walked over to operations to check on weather and get approval from our TOC for the flight back. The weather report showed some thunderstorms to the south. Our battalion commander changed up the crews.

My crew consisted of a senior PI with more than 200 hours in Iraq, and I had more than 600 hours in country. Chalk 2 consisted of a new lieutenant and an MTP who did not have a lot of time outside the traffic pattern of Forward Operating Base (FOB) Speicher. It was a good crew change due to the situation we were about to face. The battalion commander directed I take Chalk 2 to keep an eye on the tail rotor of Chalk 1. We conducted another crew brief because of the crew change and, based on my having the most experience, I took the DART team and passengers.

The thunderstorms

were approaching Q-West from the south quicker than expected. We took off without delay. After we cleared Q-West airspace, the thunderstorm was over Q-West. We responded to Q-West tower and cleared their airspace. We soon noticed some thunderstorms developing on our route of flight. After having a brief discussion with Chalk 1, we agreed I would take the lead.

I passed Chalk 1 off the right side since I was on the controls in the left seat. We changed our route and crossed the Tigris River. The reason for the flight change was to give us a recovery base should the weather toward FOB Speicher go below visual flight rules (VFR) minimums. After crossing one of the ridges, we noticed the weather toward Kirkuk had deteriorated, so we weren't able to recover there as planned. We were being funneled in one direction and that was toward Speicher. After many talks with Chalk 2, we knew we had only one way to go.

We turned our aircraft toward Speicher. We were still on the north side of the Tigris, so we had one more ridge to cross. Just when I thought the weather couldn't get any worse, dust storms appeared on our right and left. I saw our path narrowing. This was unbelievable! This was not a good situation.

I asked my crew chiefs if I was clear left. My left crew chief responded I was not clear left. I then asked if I was clear right. My right crew chief also said I was not clear right. I was a little confused and asked them to clarify why I could not turn left or right. That's when they informed me the dust storms had merged behind us.

> “Just when **I THOUGHT** the **WEATHER COULDN'T GET** any **WORSE, DUST STORMS** appeared on our **RIGHT** and **LEFT.**”

I radioed Chalk 2 and we knew there was only one way to go. I asked if Chalk 2 had their instrument approach card to Speicher. They came back with a "yes." I had hoped not to use it; nevertheless, we conducted the inadvertent instrument meteorological conditions (IIMC) brief over the radio. Both chalks knew the corresponding altitude and frequencies if the weather worsened.

Thinking ahead, I knew the air would be a concern when crossing over the other ridgeline. As we got closer to the ridgeline, I started to climb. I didn't want to start too early because I didn't want to go IIMC. As we got closer to the ridgeline, the downdraft got stronger. I was in a 5- to 7-degree nose-up attitude and pulling close to 100 percent torque. The dust storm quickly converged in front of us. Once we topped the ridge, I radioed Speicher tower about the weather. Speicher quickly came back with, "We were IMC, but now we're VFR." That was finally some good news.

The bad weather was

unyielding and we slowed down to about 80 knots to keep the ground in sight. We continued the rest of the flight off of visual cues. A normally 45-minute flight had taken us well over an hour. I had my PI perform several fuel consumption checks because we needed to know exactly how much time we had.

Our aircrews carefully synchronized the next 30 minutes, using excellent aircrew coordination skills. After looking at the global positioning system (GPS), we realized we were approaching the 10-nautical-mile ring of Speicher. I radioed Speicher tower, reported my location and requested to land. We landed at our parking spot and my passengers quickly got out of the aircraft and kissed the ground. I heard a lot of thank yous.

All our training came to reality in one flight. The weather never got any better that day and I was doing all I could to keep my UH-60L in the air. We had lightning strikes all around us and we were tossed around like a rock in a soda can.

The crew coordination in my aircraft and with Chalk 2 was amazing and was the key to completing the mission without incident. Both crews relied on their training. That training kept a bad situation from getting worse.

The moral of the story is keep your cool and rely on your training. You never know when it might one day save your life.«

NEW LOOK, GREAT INFORMATION

U.S. ARMY COMBAT READINESS/SAFETY CENTER

Visit our new Web site to find easily accessible information and tools that can assist you in keeping our Band of Brothers and Sisters

ARMY SAFE

U.S. ARMY ARMY STRONG. U.S. ARMY COMBAT READINESS/SAFETY CENTER ARMY SAFE IS ARMY STRONG I BAND OF BROTHERS & SISTERS

Drinking and

DR. PATRICIA LEDUC
Human Factors Task Force
U.S. Army Combat Readiness/Safety Center
Fort Rucker, Ala.

The debilitating effects of alcohol have been documented for centuries. A passage in an Egyptian papyrus from 1500 B.C. warned that drinking could lead to falls and broken bones. Ancient texts even refer to fatal accidents, including fires, falls and drowning, caused by drunkenness.

Most Things Don't Mix

From antiquity to the present, alcohol abuse has remained a major problem. It's amazing how things haven't changed much in the last couple thousand years. The main difference now in alcohol-related accidents is the physics. At the high speeds offered in modern vehicles, a collision or sudden impact exacts a terrible toll upon the human body.

Everyone knows drinking and driving is illegal and dangerous for the person behind the wheel, but what about the danger impaired drivers pose to passengers and others. In a number of off-duty accidents, Soldiers have lost their lives when riding in cars driven by drunk drivers.

One of the most widely known safety campaigns — "Don't Drink and Drive" — has been reinforced throughout every level of the Army. Soldiers, Family members and civilian personnel are urged not to drive after drinking and have been warned of the potential consequences.

OK, drunk driving is bad. Got it! But an equally important message is that performing just about any activity while impaired is dangerous and can result in injury or death.

> "But an **EQUALLY IMPORTANT MESSAGE** is that **PERFORMING** just about **ANY ACTIVITY** while **IMPAIRED** is **DANGEROUS** and can result in **INJURY** or **DEATH**."

Drunk Soldiers have wandered into the road or attempted to cross traffic and been hit by cars. Others were hit and killed by trains while walking on the tracks. That's right — hit by trains. Sounds pretty impossible to most of us, as trains are big and loud, but it has happened 12 times since 1998. Three of those deaths occurred during the past year. Of all 12 pedestrian/train collisions, only two didn't involve alcohol.

According to the National Highway Traffic Safety Administration (NHTSA), in both 1993 and 2003, roughly half of all pedestrians age 21 to 44 who were killed in traffic accidents had a blood alcohol content (BAC) of .08 or higher. The Army has lost 56 Soldiers in off-duty pedestrian accidents during the past 10 years. These statistics mirror those of the civilian sector, with 49 percent of Soldier pedestrian fatalities involving probable use of alcohol. All but one of these accidents occurred in the late evening, after 10 p.m., or the early morning, before 6 a.m.

You might wonder how so many people manage to get hit by cars. The answer lies in the effects of alcohol — diminished coordination and balance and impaired attention and judgment. Alcohol not only contributes to motor vehicle and pedestrian accidents, it is also a factor in other accidents such as falls, drownings and burns. Most of the sober Soldiers killed during pedestrian activities died when they had car trouble or stopped to help someone on the road.

Alcohol is the most frequently abused drug throughout the world and related injuries are a major cause of morbidity and mortality. Alcohol intoxication, common in both social drinkers and alcoholics, profoundly impairs cognitive function and motor skills.

Ironically, many people feel a sense of mastery while they are drunk. This leads them to believe that they can do anything as well as, if not better than, anyone else. This is seen in accidents where Soldiers tried climbing balconies or hanging out of barracks windows while under the influence of alcohol. Many of these accidents did not have happy endings.

Since fiscal 1999, 32 Soldiers have died from off-duty falls. Only eight (25 percent) of these Soldiers were confirmed not to be under the influence. Data from the National Center for Injury Prevention and Control (NCIPC) shows that excessive alcohol consumption is a significant factor in civilian accidental deaths from falls.

> “In addition, **ALCOHOL** use is **INVOLVED** in about **HALF** of all **WATER RECREATION DEATHS** such as boating.”

The NCIPC also reports that alcohol is involved in 40 to 50 percent of drowning deaths among young males. In addition, alcohol use is involved in about half of all water recreation deaths such as boating. Seventy-five Soldiers have drowned in swimming, boating, fishing and personal watercraft accidents over the last decade. Of those, 92 percent were males, with 75 percent being under the age of 30. In those cases where alcohol use was examined, 42 percent involved the use of alcohol. And by the way, none of the Soldiers who drowned were wearing a life jacket.

Alcohol can impair our ability to do many things. That is why all 50 states, the District of Columbia and Puerto Rico impose a BAC limit of below .08 for driving. In addition, most states impose a BAC limit of either .08 or .10 or lower for boating, and all states have boating-under-the-influence laws.

Ancient Egyptians warned us alcohol could make people act stupid. They described an excessive beer drinker's behavior as: "You think it proper to run down a wall and to break through the board gate; the people run away from you … if you then talk, so from your mouth comes nonsense."

We have all seen someone behave that way when they drank too much. If you see a battle buddy about to misstep and possibly cause themselves or others harm, intervene. It usually doesn't take much to influence them to do the right thing.

If you drink, take a cab. If you drink, don't go swimming. If you swim, wear a life jacket.

If you have a particularly argumentative friend who insists on acting stupid, call the police. It's better to have a ticked-off friend with a public intoxication ticket than to wake up the next morning hung over to find out that your friend is now a statistic in our database. Watching out for your buddies, even when you aren't on duty, is still part of the job description of "friend."«

Army Strength Starts Here...
...which gives you Strength Here.

Family engagement kit

https://safety.army.mil

Army Safe is Army Strong and that starts with a Soldier's Family. Have the information to help you and your Family stay SAFE.

Be prepared and get your own Family Engagement Kit TODAY!

Cleaning House

VICKI ARNESON-BAKER
G5
U.S. Army Combat Readiness/Safety Center
Fort Rucker, Ala.

Housekeeping — it's a chore many of us would prefer to avoid. But did you know good housekeeping practices in the workplace can keep you safe?

Importance of Housekeeping

Poor housekeeping frequently contributes to accidents by hiding hazards. These hazards can cause accidents such as tripping over materials left on floors and other walkways; being hit by falling objects; slipping on greasy, wet or dirty floors; running into poorly stored items; or cutting, puncturing or tearing the skin of hands or other body parts on sharp, projecting materials.

If unorganized storage areas, cluttered hallways or slick floors are considered normal in your workplace, then other, more serious safety hazards may easily be overlooked. Good housekeeping habits support composite risk management (CRM) practices by helping us identify, assess and mitigate or eliminate hazards in the workplace.

To avoid these hazards, a workplace must maintain good housekeeping practices throughout the day. However, there's more to housekeeping than just cleanliness. It also includes keeping work areas neat and orderly; storing items properly; ensuring floors and other work surfaces are free of slip and trip hazards; and removing waste materials (e.g., paper, cardboard) and other fire hazards.

Regulatory Requirements

The relationship between good housekeeping and a safe working environment is widely recognized as a good practice. The Occupational Safety and Health Administration (OSHA)

FYI

For more detailed information on 6S, visit the Environmental Protection Agency's Web site at http://www.epa.gov/lean/toolkit/ch5.htm.

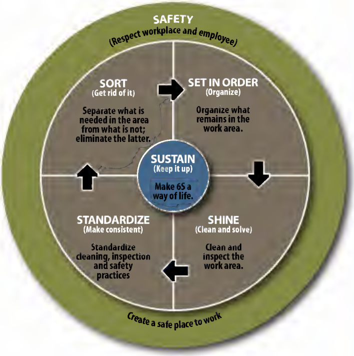
requires "all places of employment, passageways, store rooms, and service rooms shall be kept clean and orderly and in a sanitary condition" (29 CFR 1910.22 (a)). Maintaining good housekeeping is also required by Department of the Army Pamphlet 385-10, Army Safety Program, paragraph 14-8 b (3), which states, "Storage areas will be kept free from accumulation of materials that constitute hazards from tripping, fire, explosion, or pest harborage."

Developing a Good Housekeeping Program

A good housekeeping program must include careful planning, a clean-up standing operating procedure or policy, an effective inspection process and continuous supervision and enforcement of housekeeping rules. Remember that good housekeeping is maintained, not achieved. Develop a daily clean-up policy and periodically review housekeeping rules, policies and procedures. Effective housekeeping is an ongoing, conscious effort by everyone working in the area throughout the day. Housekeeping that relies on spring clean-up events are more time consuming and less effective in eliminating hazards and reducing accidents.

Best Practice

One best practice for good housekeeping is the U.S. Environmental Protection Agency's 6S method to create and maintain a clean, orderly and safe work environment. The 6S is based upon the five pillars (5S) of the visual workplace in the Toyota Production System, plus a separate pillar for safety (5S + Safety), as seen in the graphic below.


SAFETY
(Respect workplace and employee)
SORT
(Get rid of it)
Separate what is needed in the area from what is not; eliminate the latter.
SET IN ORDER
(Organize)
Organize what remains in the work area.
SUSTAIN
(Keep it up)
Make 6S a way of life.
STANDARDIZE
(Make consistent)
Standardize cleaning, inspection and safety practices
SHINE
(Clean and solve)
Clean and inspect the work area.
Create a safe place to work

Remember, good housekeeping practices are not only required by laws and regulations, they also protect you by reducing workplace hazards.«

HOUSEKEEPING CHECKLIST

- **Floors**
  Keep floors clean, dry and free of debris and in good condition.
- **Aisles and Stairways**
  Should be clearly marked and well lit; good stair treads; unobstructed; and free of temporary storage.
- **Spill Control**
  Promptly clean up spills; use proper absorbent rags for greasy, oily materials; and dispose of used rags properly and promptly.
- **Equipment**
  Inspect regularly, use drip pans to contain leaks, repair/report broken tools, return equipment and tools to their proper place after use. Service guards and safety features to ensure they are operational.
- **Waste Disposal**
  Properly dispose of waste, ensuring you have an adequate number of containers, including those approved for toxic and flammable waste. Empty those containers regularly.
- **Storage**
  Stack materials neatly, place heavy or bulky items on the bottom, keep cabinet doors and drawers closed when not in use.

CLEAN-UP TIPS

- **Wear eye protection.**
- **Use hearing protection with loud equipment, such as a leaf blower.**
- **Wear gloves to protect hands while picking up debris.**
- **Be aware of traffic and warn traffic of work ahead.**
- **Wear proper footwear to protect feet.**
- **Review safety precautions for tools and equipment (ladders, lawnmowers).**

Accidents occurred between Dec. 1-31, 2008

AVIATION

AH-64D

CLASS C

- The aircraft contacted the approach edge of a concrete helipad during landing, resulting in damage to the 30 mm cannon, surrounding fuselage area and portions of the main landing gear.

UH-60A

CLASS A

- The aircraft's main rotor system contacted a power line during liftoff. During an attempted recovery, the rotor struck a utility pole.

UH-60L

CLASS B

- As the pilot in command (PC) and crew chief were boarding the aircraft, it became airborne for an unknown reason. Both crewmembers fell about five feet to the ground. The PC suffered potentially disabling injuries.

WERE THE CONTROLS GUARDED WHEN THE CREWMEN WERE ENTERING THE AIRCRAFT?

MH-60L

CLASS C

- A cabin window separated from the aircraft in flight and damaged the tail rotor gearbox cover and one tail rotor paddle. The window was recovered.

UAS

MQ-5B

CLASS B

- The UAS failed to respond to flight control input during operator training and drifted off the runway, striking both controllers and coming to rest in an adjacent ditch.

RQ-7B

CLASS B

◘ The UAS experienced an engine failure while in Tactical Automated Landing System mode. The recovery chute was deployed and the UAS landed with significant damage.

◘ The aircraft experienced a generator failure and subsequent engine failure indication during flight. The recovery chute was deployed, but the signal was lost. The UAS landed with significant damage.

GROUND

ACV

CLASS A

◘ Three Soldiers were killed when their M1151 HMMWV overturned into a canal next to a roadway. The section of the road the Soldiers were traveling collapsed under their vehicle due to recent rains. Personal protective equipment (PPE) use was not reported.

Personnel Injury

CLASS B

◘ A Soldier's left index finger was amputated to the first knuckle when it was caught between the fairlead and winch cable during vehicle maintenance.

◘ A Soldier partially severed two fingers and severely damaged another finger while cutting wood with a table saw for a unit self-help project. The Soldier was not using the saw's blade guard.

◘ A Soldier on lifeguard duty at a beach suffered a permanent partial disability injury when he dived into shallow water. The Soldier was pulled from the water by other lifeguards and transported to a hospital.

DRIVING

POV

CLASS A

◘ A Soldier was driving his large sport utility vehicle with another Soldier riding as a passenger when he struck the back of a parked tractor-trailer. Although the Soldier driving the vehicle survived, his passenger died at the scene. According to police reports, the Soldier driving the vehicle was intoxicated. Both Soldiers were wearing their seat belts.

◘ A Soldier was driving home following unit PT during inclement weather when he lost control, slid into the oncoming lane and collided with a pickup. The Soldier, who was wearing his seat belt, was taken to a local medical center, where he was pronounced dead.

ARMY AVIATION LOSSES

Fiscal 2009

as of Mar. 4, 2009

	Class A/Fatalities
ATTACK	0/0
RECON	1/2
UTILITY	3/2
CARGO	0/0
UAS	1/0
FIXED-WING	0/0
TRAINING	0/0
TOTAL	5/4

ARMY GROUND LOSSES

Fiscal 2009

as of Mar. 4, 2009

	Class A/Fatalities
AMV	11/10
ACV	5/2
PERSONNEL INJURY includes weapons-handling accidents	14/11
FIRE/ EXPLOSIVE	1/0
PROPERTY DAMAGE	0/0
TOTAL	31/23

■ A Soldier was driving his privately owned vehicle (POV) — a high-performance, rear-wheel-drive car — following unit physical training (PT) when it left the road, crossed the median and struck a vehicle in the oncoming lane. Snow and icing conditions were present at the time of the accident. The Soldier, who was wearing his seat belt, died at the scene.

LEADERS, DO YOUR SOLDIERS KNOW REAR-WHEEL-DRIVE POVS CAN BE TRICKIER TO HANDLE ON ICY ROADS THAN FRONT-WHEEL-DRIVE MODELS?

■ A Soldier with a civilian passenger was speeding in his sports car when he went off the road and struck a tree. The Soldier, who was home on leave, died at the scene and the passenger was taken to a local medical center. The Soldier was not wearing his seat belt.

■ A Soldier was driving late at night when he lost control, struck a median and then collided head-on with a tractor-trailer. The Soldier, who was on leave and on a lengthy road trip to visit family, died at the scene.

■ A Soldier was speeding in his pickup early in the morning when he lost control in a curve, left the road and hit a tree. The Soldier was not wearing his seat belt and died at the scene.

POM

CLASS A

■ A Soldier was using his privately owned motorcycle (POM) to travel on permissive temporary duty when he broadsided a civilian driver who pulled out in front of him. The Soldier was taken to a local medical center, where he was pronounced dead. The Soldier had received the required Motorcycle Safety Foundation (MSF) training and was wearing his helmet and PPE.

■ A Soldier was operating his sportbike on an interstate when he rear-ended a dump truck and struck a guardrail. The Soldier, who had received MSF training and was wearing his helmet and PPE, was pronounced dead at a local hospital.

■ A Soldier was operating his sportbike when it broadsided a pickup as it pulled into the right lane of the highway. The Soldier was thrown from his bike and died at the scene. Local authorities reported speed was a factor in the crash. The Soldier, who was wearing his helmet and PPE, had completed MSF training and was a member of his installation's motorcycle mentorship program.

■ A Soldier was going more than 100 mph on his sportbike when he struck the passenger side of a civilian-owned POV as it was turning. The impact killed both the Soldier and the civilian driver. The Soldier had completed MSF training and was wearing his helmet and PPE.

DO YOUR SOLDIERS UNDERSTAND THAT RECKLESSNESS ON A MOTORCYCLE THREATENS THEMSELVES AND OTHERS ON THE ROAD?

Editor's note: Information published in the accident briefs section is based on preliminary loss reports submitted by units and is subject to change. For more information on selected accident briefs, e-mail safe.knowledge@conus.army.mil.

POV DRIVING LOSSES

Fiscal 2009

as of Mar. 4, 2009	Class A/Fatalities
CAR	15/16
SUV/JEEP	8/8
TRUCK	6/5
MOTORCYCLE	10/10
PEDESTRIAN	5/5
OTHER*	1/1

*Includes: vans and ATVs

45 TOTAL DEATHS

Fiscal 2008: 54 3 year average: 47

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